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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/981,654	01/08/1998	YASUSHI KANEKO	971480	8315
38834	7590	03/05/2004	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/981,654	KANEKO ET AL.	
	Examiner	Art Unit	
	Dung Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) 4-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/03/2003 has been entered.
2. Applicants' response dated 11/12/2003 has been received and entered. Claims 1 and 3 are still pending in the application.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 and 3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Amstutz et al., US Patent No. 4,634,229, in view of Natsunaga, US Patent No. 5,548,423, as stated in the office action 11/19/2001.

Regarding claim 1, Amstutz et al., figure 1, disclose a liquid crystal display (LCD) apparatus having:

A pair of transparent substrates (1, 2), each having parallel strips of electrode layers (6, 7);

A super twist nematic liquid crystal (5) is sandwiched between the pair of substrates (1, 2), wherein the total twisted angle (Φ) of liquid crystal molecules is between 180° and 360°;

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A pair of polarizers (10, 11) is disposed to the outside of the pair of substrates (1, 2), wherein the polarizers having absorption axes which are orthogonal to each other (col. 5, lines 4-8) and the absorption axes inherently being angled 45° respect to a direction of the orientation of liquid crystal molecules in an intermediate portion in a direction of thickness of the liquid crystal layer (i.e., $\Phi = 190^\circ$, $\Psi = 90^\circ$, $P1 = 45^\circ$ and $P2 = 90^\circ$).

Amstutz et al. do not disclose the LCD can be driven by applying a voltage of 10 to 20V. However, Natsunaga does disclose that drive region can be in the range of VL (3 to 5V) to VM (30 to 40V) (figure 9). Therefore, such disclosed range in Natsunaga makes possible the claimed range of 10V to 20V overlapping ranges are at least obvious. In re Malagari, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

Regarding claim 3, although Amstutz et al. do not disclose the value of $\Delta n.d$ that lies within a range of 600 to 900nm, Amstutz et al. do disclose the range of 800 to 1200nm for the $n.d$ (claim 6). Therefore, such disclosed range in Amstutz et al. makes possible the claimed range of 600 to 900nm and overlapping ranges are at least obvious. In re Malagari, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

Response to Arguments

5. Applicant's arguments filed 11/12/2003 have been fully considered but they are not persuasive:

Applicants' arguments are as follow:

1. The Amstutz et al. polarizers cannot be crossed 90° by the twist angle claimed ranged (e.g., greater than 180° and less than 260°)(response, page 4).

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2. As shown in Exhibit 3 (Amstutz and/or modified Amstutz cases), it is clear that Amstutz neither disclose nor suggest the features recited in claim 1 (response, page 5-6).

It is noted that Applicants' arguments only focus the discussion on the Amstutz reference.

The Examiner responses to the Applicants' arguments are as follow:

1. The Examiner is respectfully disagreed with the Applicants' view point since Amstutz clearly disclose that the direction of vibration of the polarizers (10 and 11) is perpendicular to each other (col. 5, lines 4-8). In addition, even if the vibration directions of the polarizers change, it would not means that the cross angle of the vibration directions of the polarizers would not set at 90° .
2. The Examiner might agrees that at the twist angle of 240° , the Amstutz et al. polarizers cross angle and/or the angle between the absorption axes of the polarizing plates and the intermediate liquid crystal do not fall within the claimed range; however, it should be noted that the Amstutz et al. twisted angle is not limited by 240° only, the range of the Amstutz et al. twisted angle is 180° to 360° which is overlapping to the claimed range, so as at least the Amstutz et al. twisted angle at 190° , as stated above, met the limitation of claim 1.

Conclusion

6. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114.

See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
02/20/2004



Dung Nguyen
Patent Examiner
Art Unit 2871